



CARDD
MEPA ROUTING MEMO

To: Mark Bostrom
Through: Autumn Coleman
From: Demi Blythe

Re: Final EA for Chris Madrid – Private Loan
Project Sponsor: Chris Madrid
Name of Project: Irrigation Pivot Installation
Agreement No: TBD

Memo:

DNRC can issue a Final Environmental Assessment - Finding of No Significant Impact for the Chris Madrid Irrigation Pivot Installation project under the Private Loan program (attached). We scoped the project for 14 days and there were no public comments.

SIGNATURE REQUIRED

s/DEB MMB MEPA/NEPA Coordinator Review

Bureau Chief Review

Division Administrator Signature

Post for _30_ Days on DNRC's Environmental Docs page.

File

NATURAL RESOURCES AND CONSERVATION



GREG GIANFORTE, GOVERNOR

1539 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE: (406) 444-2074
FAX: (406) 444-2684PO BOX 201601
HELENA, MONTANA 59620-1601**FINAL**

ENVIRONMENTAL ASSESSMENT

Project Name:	Irrigation Pivot Installation
Proposed Implementation Date:	October 2021
Proponent:	Chris Madrid
Location:	Harrison, MT; Township 2S Range 2W Section 11
County:	Madison

I. TYPE AND PURPOSE OF ACTION

A private landowner, Chris Madrid, proposes to use DNRC private loan funding for the installation of an irrigation pivot near Harrison, Madison County, Montana, Section 11 Township 2S Range 2W. The project proposes to be implemented in October 2021 for use in Spring 2022. The purpose of this project is to increase the production and profitability of the private ranch while providing wildlife habitat.

DNRC will approve the private loan to provide funding for the irrigation pivot installation project.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project. List number of individuals contacted, number of responses received, and newspapers in which notices were placed and for how long. Briefly summarize issues received from the public.

DNRC – CARDD Program Specialists will post this EA for scoping for two weeks and attach all submitted public comments. The proponent did not submit letters of support or provide public comment. The proposed action is occurring on their private lands and it is unknown to what extent their water development may impact surrounding lands.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

Examples: cost-share agreement with U.S. Forest Service, 124 Permit, 3A Authorization, Air Quality Major Open Burning Permit.

The proposed project area (POU) will extend beyond the irrigated area designated in the water right(s) or outside the area historically irrigated with the existing water right and will likely require an authorization from DNRC to change the water right.

3. ALTERNATIVE DEVELOPMENT:

Describe alternatives considered and, if applicable, provide brief description of how the alternatives were developed. List alternatives that were considered but eliminated from further analysis and why. Include the No Action alternative.

The expected benefits from the proposed project are to increase water delivery efficiency, improve farm profitability, and provide better pasture management. There are two alternatives to describe:

- Alternative 1: *No Action Alternative* – Irrigation pivot will not be installed, and infrastructure will remain in current conditions
- Alternative 2: *Proposed Alternative* – The proposed project expects to install one irrigation pivot.
- Alternative 3: *Flood Irrigation* – This alternative was rejected given flooding does not work well in the area with the unevenness of the ground, ditch loss, and increased labor costs.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify direct, indirect, and cumulative effects to soils.

DNRC Program Specialists mapped the soils resource using the NRCS web soil survey application and gathered soils data by Section (in this case, Section 11). The primary soil type in the defined area is Groff-Chaffee, occasionally flooded-Pleine, frequently ponded, families complex (0-4% slopes - 60% of defined area) and Brocko silt loam, cool (2-12% slopes, 40% of defined area). The Groff-Chaffee complex is not considered prime farmland and is poorly drained. Brocko silt loams are considered Farmland of local importance and are well-drained.

Proposed Alternative – The proposed alternative impact to the soil resource may be both adverse and beneficial. The adverse effects will be short-term, and the disturbance is limited to the pivot wheel areas. The proposed alternative will likely be beneficial long-term because the farm will have a more diverse crop rotation which will feeding soil biology and increase plant biomass.

No Action – No impact to soil resources as no disturbances will occur.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify direct, indirect, and cumulative effects to water resources.

The proposed project area is located near North Willow Creek, a tributary to Willow Creek, which is in the Jefferson Watershed Basin (HUC 10020005). Willow Creek drains an area of approximately 85.9 mi² (USGS 06035000 Willow Creek near Harrison, MT gaging station).

Current groundwater levels vary considerably but are relatively shallow (static water levels range from 5-16 feet; Source: MBMG Groundwater Information Center Map Application).

North Willow Creek is listed on the Montana DEQ 303d as not fully supporting drinking water or aquatic life due to water quality impairment. There have been changes in the natural flow regime, physical substrate habitat, and stream-side or littoral vegetative covers likely due to grazing in riparian or shoreline zones, natural sources, impacts from Abandoned Mine Lands (inactive), irrigated crop production, agriculture, subsurface (Hardrock mining), and channelization. These sources of degradation have contributed to increased levels of mercury and lead (Source: Montana DEQ Search Tools – 2020 Water Quality Information).

Proposed Alternative – The proposed project may provide both direct, potentially beneficial, and adverse impacts as conversion to pivot irrigation as opposed to dryland farming will increase water use. However, pivot irrigation is largely more efficient and increased plant biomass may increase water storage capacity and thus, water may not need to be pumped as frequently.

No Action – There will likely be minimal impacts to water quantity, quality, and distribution if no action is taken to improve current pasture management.

6. AIR QUALITY:

What pollutants or particulate would be produced (i.e. particulate matter from road use or harvesting, slash pile burning, prescribed burning, etc)? Identify the Airshed and Impact Zone (if any) according to the Montana/Idaho Airshed Group. Identify direct, indirect, and cumulative effects to air quality.

The project area is not listed as impaired in air quality particulates per the Montana DEQ Air Quality Nonattainment Status list (Source: Montana DEQ Air Quality Website visit).

Proposed Alternative – Potentially adverse impacts to air quality associated with construction; however, these impacts are expected to be minor and short-term as construction time is expected to be relatively short in comparison to the life expectancy of the project.

No Action – No impact to current air quality.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify direct, indirect, and cumulative effects to vegetation.

The project area is primarily within private lands (93%), and the remaining on public federal or state lands. Rocky Mountain Lower Montane, Foothill, and Valley Grassland (44%), cultivated crops (30%), Montana Sagebrush Steppe (11%), and introduced vegetation (5%) are the dominant land covers (Source: Montana Natural Heritage Program web MapViewer). There are no listed plant species of concern that may occur in the project area (Source: Montana Natural Heritage Program website). In addition, there is one threatened and one proposed threatened/endangered plant species listed on the USFWS website that could occur in the project area (Source: https://www.fws.gov/montanafieldoffice/Endangered_Species/Listed_Species/countylist.pdf).

Proposed Alternative – Potentially beneficial as the pivot will provide improved water delivery, which is expected to better crop production. Better crop production may in turn protect sensitive or fragile plant species by reducing extensive erosion associated with other cattle grazing and movements.

No Action – The local grassland community may be minimally impacted by the current pasture management. Therefore, the current vegetation may not be significantly impacted if there was no change to the environment.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify direct, indirect, and cumulative effects to fish and wildlife.

The project area does not fall within an Executive Order – General/Priority habitat area for sage grouse, and therefore will not likely impact sage grouse habitat (DNRC Montana Sage Grouse Habitat Conservation Map). Though the project area does not appear to be impacting crucial and/or critical habitat areas, there are 9 Species of Concern and one Special Status Species (Bald Eagle) listed for the Township and Range that may occur in the project area (Montana Natural Heritage Program).

Proposed Alternative – Potentially beneficial as increased hay production creates nesting habitat for pheasants and sandhill cranes, among other similar nesting avian species; however, the project could prove adverse to aquatic habitats given the project is located near North Willow Creek and natural wetland areas.

No Action – No impact to terrestrial, avian, and aquatic life and habitats.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify direct, indirect, and cumulative effects to these species and their habitat.

The project area does not fall within an Executive Order – General/Priority habitat area for sage grouse, and therefore will not likely impact sage grouse habitat (DNRC Montana Sage Grouse Habitat Conservation Map). Though the project area does not appear to be impacting crucial and/or critical habitat areas, there are 9 Species of Concern and one Special Status Species (Bald Eagle) listed for the Township and Range that may occur in the project area (Montana Natural Heritage Program).

DNRC used the USFWS National Wetlands Inventory Wetlands Mapper tool to investigate wetlands in the project area. This search indicates there are freshwater emergent (PEM1A classification) wetlands occurring in the proposed pivot location.

Proposed Alternative – While the project may benefit terrestrial habitat, the project will be implementing a pivot irrigation system across freshwater emergent wetlands. An addition, any surface or groundwater flows used may impact wetland water supply. DNRC recommends consultation with the U.S. Army Corps of Engineers for a Section 404 permit.

No Action – No impact to unique, endangered, fragile, or limited environmental resources.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine direct, indirect, and cumulative effects to historical, archaeological or paleontological resources.

The project area is primarily on private, cropland and irrigated fields with no known historic or archeological resources in the area.

Proposed Alternative – No impact is expected as there have been no historic or archaeological resources identified in the proposed project area. If previously unknown cultural or paleontological materials are identified during project related activities, the DNRC grant manager will be notified, and all work will cease until a professional assessment of such resources can be made.

No Action – No impact to historical or archaeological sites.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify direct, indirect, and cumulative effects to aesthetics.

The project area is on rural private property which is comprised primarily of cultivated cropland and/or Rocky Mountain Lower Montane, Foothill, and Valley Grassland. In addition, the project is approximately 1.75 miles southwest from the town of Harrison, and therefore outside of populated, residential areas.

Proposed Alternative – There may be minimal adverse impacts given the pivot is a large sprinkler; however, the project will cause minimal nuisance (e.g., glare, fumes) as the proposed project is on private lands.

No Action – no impact to aesthetics.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify direct, indirect, and cumulative effects to environmental resources.

The project will include the supply and delivery of a 1,723 ft Reinke Center Pivot that will provide irrigation coverage of approximately 117.9 acres. The proposed pump site will include electrical components and will be consolidated to provide the smallest effective footprint for ease of construction of cattle protection structures.

Proposed Alternative – Potentially minimal adverse impacts to demand on energy resources as the system requires electricity to run the irrigation pivot pump; however, given the system relies on 90% natural pressure head, the impacts may be minimal. There will also be a beneficial impact to water resources given this system appears to be more efficient at water delivery and perhaps less demand for water in the long-term.

No Action – The current flood irrigation system likely demands more water and is less efficient at distribution for crops. The no action alternative will continue to demand increased water delivery.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

There are wetlands in the proposed pivot area that may require pre-consultation with the U.S. Army Corps of Engineers to apply for a Section 404 permit.

Existing water right will undergo a change of use in terms of the area irrigated and will require an application with the DNRC Water Rights Bureau.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

The project implements floodplain irrigation on private crop- and pastureland.

Proposed Alternative – Potentially beneficial as the project proposes to use a pivot irrigation system controlled by either a remote application or going to the pivot point to start the pivot. The pump control will be wired to automatically start from the pivot point (or remote control) as well as shut off the pump if inadequate pressures are observed. The operator select the depth of the required application or the speed, verifies directions, and presses start.

No Action – No impact to human health and safety.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

The project is on irrigated, rural farmland where the primary crops produced from the irrigated area are straw and hay. The project area irrigates a total of 117.9 acres. As of September 2021, straw sells at \$90/ton and hay at \$250/ton in Harrison, Montana. There are an estimated 218 tons of straw and 1500 tons of hay produced, totaling values of \$19,620 and \$375,000, respectively.

Proposed Alternative – Potentially beneficial as the pivot increases both water efficiency and distribution. The increase in water efficiency and distribution will likely produce more hay and straw and thus more revenues. The 2022, 2023, and 2024 estimated gross income for straw and hay production is approximately \$60,000.00, \$65,000.00, and \$70,000.00, respectively.

No Action – The project proponent will continue to use floodplain irrigation for straw and hay crop production, which provides less water efficiency and distribution is poor. The poor distribution may prove additionally detrimental during drought, due to excessive evaporation or other natural loss, and thus significantly impacting crop production.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify direct, indirect, and cumulative effects to the employment market.

The landowners (applicant) install and maintain the current infrastructure on the farmlands.

Proposed alternative – Potentially beneficial, short-term impact as the installation would be performed by local contractors. In addition, the additional production of alfalfa may create more transportation need.

No Action – No impact to quantity and distribution of employment.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify direct, indirect, and cumulative effects to taxes and revenue.

Current value from grazing, irrigated, farmsite, and Total Agricultural Land is approximately \$2,900,000 (Sheet attached in application). The taxable value of the properties owned by the applicant appear to be \$723 in 2020 and \$1,008 in 2021 (Montana Property Assessment Division, <https://svc.mt.gov/dor/property>).

Proposed Alternative – Potentially beneficial as the proposed alternative will provide more efficient water delivery and distribution, thus increasing crop production. Given the crop product (alfalfa) could be sold within Harrison (see attached application), there is likely local and state revenue benefit through the selling of hay for livestock.

No Action – No impact is expected to local and state tax base and tax revenues.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify direct, indirect, and cumulative effects of this and other projects on government services

The project is on rural, private farm- and pastureland and approximately 1.75 miles to the southwest of Harrison.

Proposed Alternative – No impact to demand for government services.

No Action – No impact to demand for government services.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

The project is on rural, private farm- and pastureland and any action is voluntarily adopting any local environmental plans. The proposed area is not within critical habitat for Sage Grouse or other sensitive species, and therefore not subject to necessary permits/coordination with state agencies. There are no other known zoning or management plans for the proposed area.

Proposed Alternative – No impact to locally adopted environmental plans or goals.

No Action – No impact to locally adopted environmental plans or goals.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify direct, indirect, and cumulative effects to recreational and wilderness activities.

The project is on rural, private farm- and pastureland. While the North Willow Creek corridor is within one mile of the project area, it is not in direct access to the Creek.

Proposed Alternative – No direct impact to access to or quality of recreational and/or wilderness activities; however, there may be indirect, cumulative impact to water quantity given the water rights cover usage from North Willow Creek, which may affect boating, fishing, or any other recreational activities.

No Action – No impact to access to or quality of recreational and/or wilderness activities.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify direct, indirect, and cumulative effects to population and housing.

The population of Madison County in 2020 was estimated at 8,959 individuals (2.4% increase for the County; MT Dept. of Commerce: <http://ceic.mt.gov>). In addition, there are approximately 7,002 housing units in Madison County (2019 data; <https://ceic.mt.gov/People-and-Housing/Housing>).

Proposed Alternative – No impact is expected to the county population. Given the project is expected to be short-term and performed by the applicant/landowner and local contractor, no additional housing is expected.

No Action – No impact to density and distribution of population and housing.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

The project area is largely made up of rural, cultivated cropland and/or Rocky Mountain Lower Montane, Foothill, and Valley Grassland (Source: Montana Natural Heritage Program). The agricultural way of life provides the most common type of lifestyle/community for the county.

Proposed Alternative – No impact is expected to change social structures and/or lifestyles from the project, but it may enhance the current communities and lifestyles. By creating more efficient water delivery, the project will likely conserve groundwater and/or surface water sources. Increased efficiency and conserved water will create benefits locally, regionally, and statewide in the form of increased livestock food supply, improved recreational opportunities, and economic impacts.

No Action – No impact to social structures is likely given the area is primarily on private land.

23. CULTURAL UNIQUENESS AND DIVERSITY:

How would the action affect any unique quality of the area?

Agricultural lands sustain the way of life for Madison County and the greater Harrison area, providing local and regional food supply for the overall area.

Proposed Alternative – No impact is expected to the cultural uniqueness and/or diversity to the project area given the project is on private land.

No Action – No impact to cultural uniqueness or diversity resources.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify direct, indirect, and cumulative economic and social effects likely to occur as a result of the proposed action.

The proposed project is located on private land and there are no defined management strategies benefiting the current social and economic circumstances of the area.

Proposed Alternative – No impact is expected to additional social or economic circumstances as the project is on private lands; however, more efficient watering facilities may increase livestock production to some extent and therefore benefit the local area for a long-term, cumulative impact.

No Action – No impact to social or economic circumstances.

EA Prepared By:	Name: Demitra Blythe	Date: 9/29/2021
	Title: CARD Division MEPA Coordinator	
	Email: Demitra.Blythe@mt.gov	

V. FINDING**25. ALTERNATIVE SELECTED:**

Alternative 2 – Pivot Installation

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

No mitigation measures were discussed by the applicant. DNRC strongly recommends a pre-consultation by US Army Corps of Engineers given the pivot will be installed on USFWS-defined freshwater emergent wetlands. In addition, the applicant will also need to consult with DNRC Water Rights Bureau regarding their change of use for the proposed pivot area.

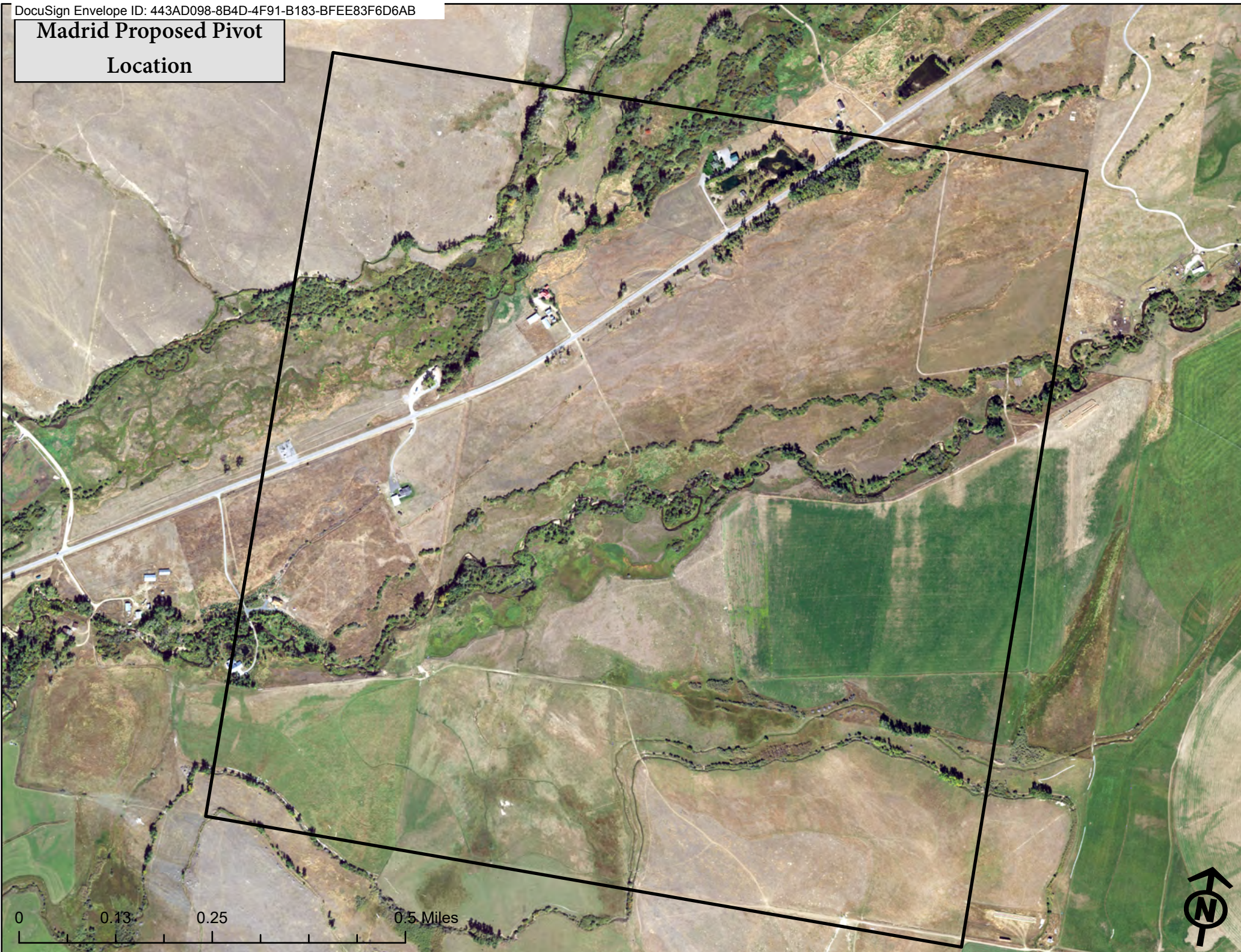
27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:☐ EIS☐ More Detailed EA☒ No Further Analysis

EA Approved By:	Name: Mark Bostrom
	Title: CARD Division Administrator
Signature:	Date: 10/15/2021 11:31:52 AM MDT

DocuSigned by: Mark W Bostrom
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Madrid Proposed Pivot

Location

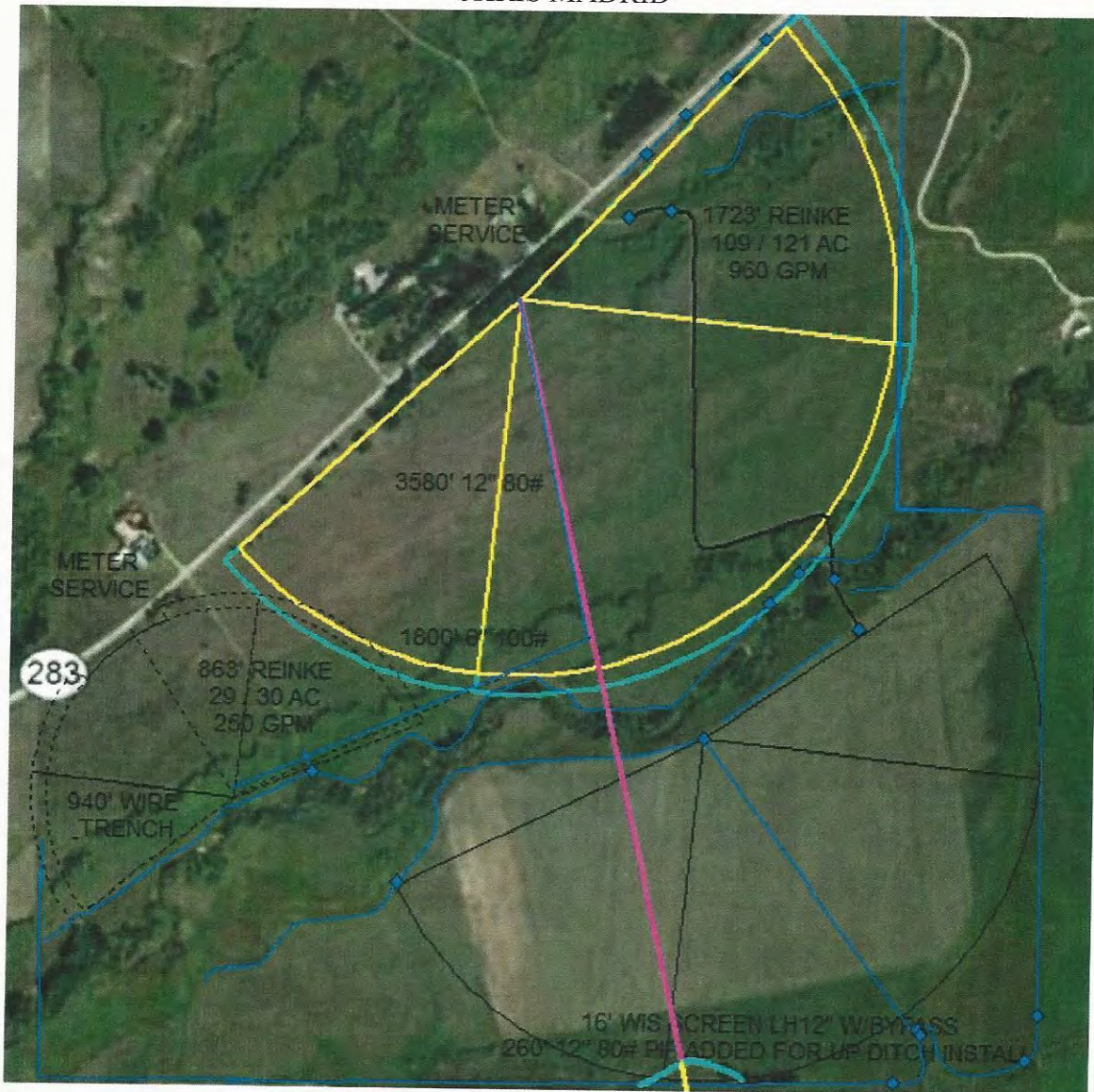




Watson Irrigation Specialists, Inc.
1-800-564-2845 OR 1-406-266-3741 FAX 406-266-4498
7837 US HWY 287 TOWNSEND MT. 59644

cwatson@mt.net

DESIGNED
FOR
CHRIS MADRID

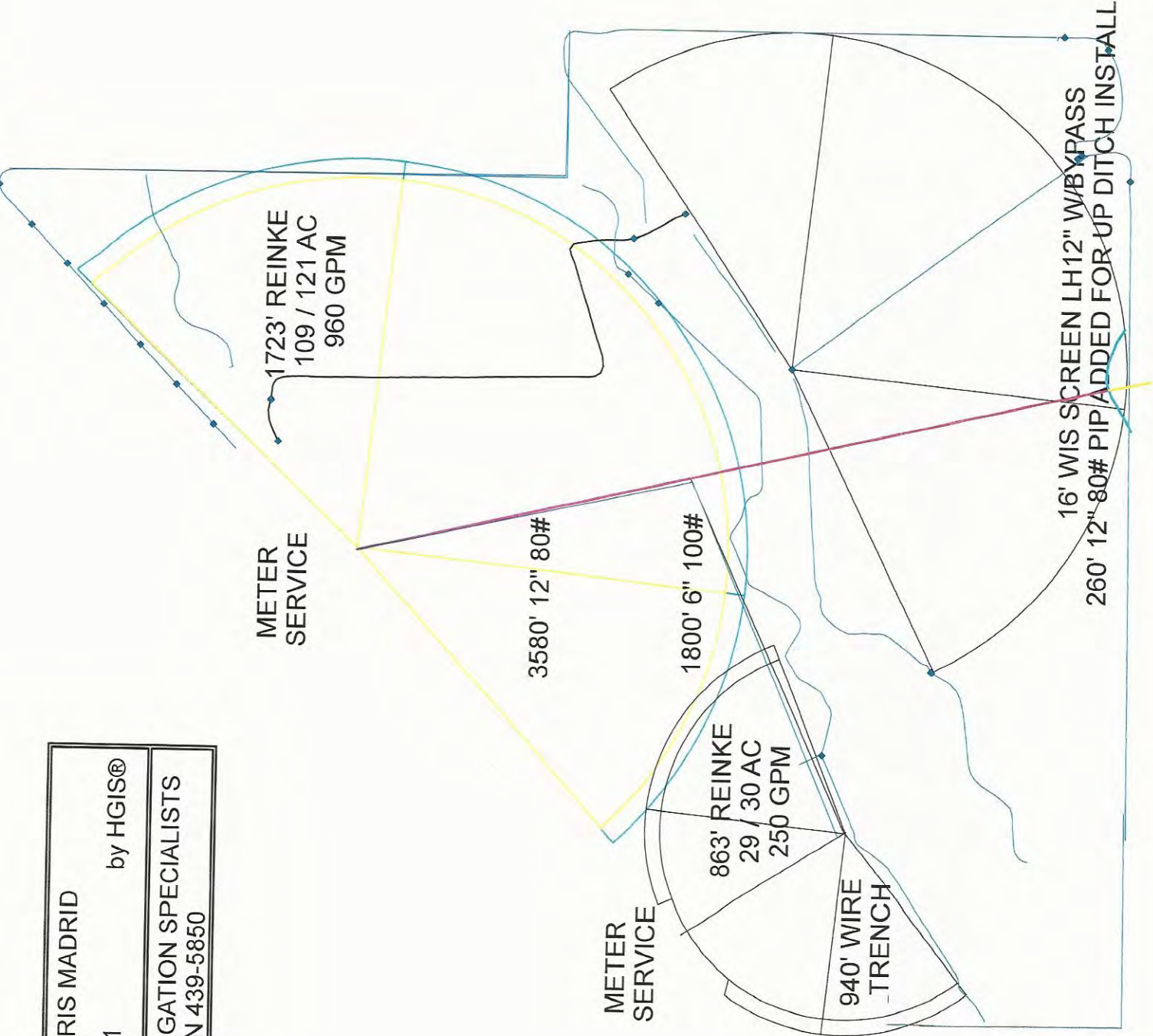


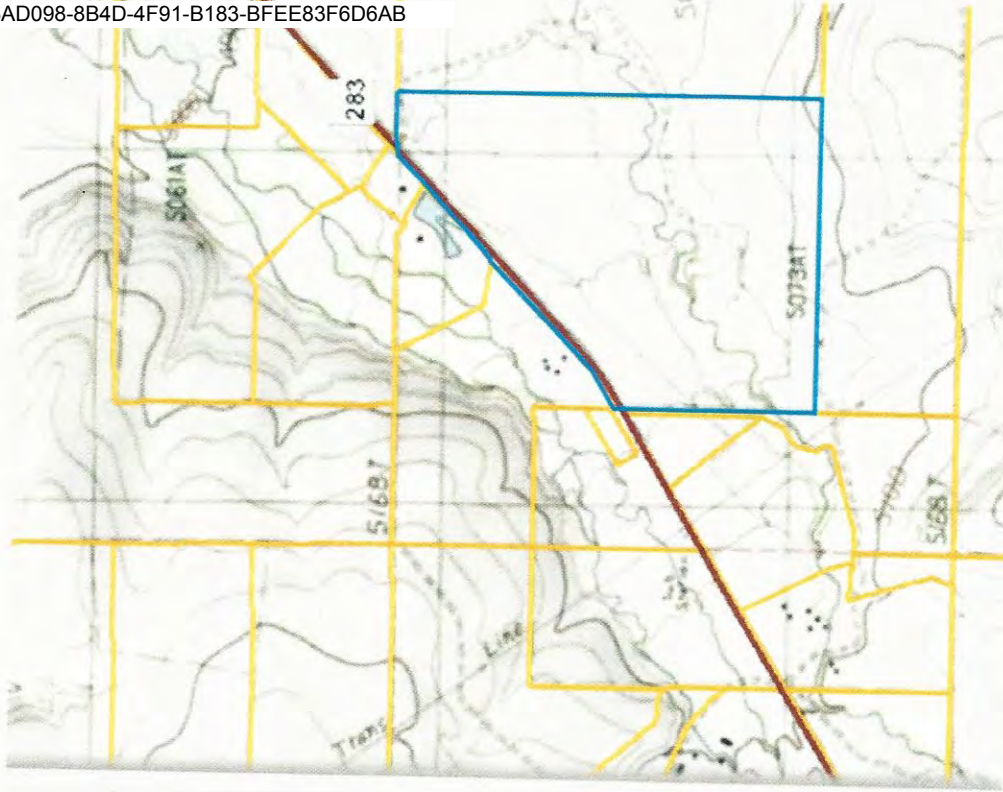
BY
CLAY WATSON

CHRIS MADRID	by HGIS®
27 August 2021	
WATSON IRRIGATION SPECIALISTS	
CLAY WATSON 439-5850	



CHRIS MADRID	by HGIS®
27 August 2021	
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CLAY WATSON 439-5850	





Primary Information

Property Category: RP **Subcategory:** Agricultural and Timber Properties
Geocode: 25-0789-11-2-01-05-0000 **Assessment Code:** 0016006450
Primary Owner: **PropertyAddress:**
MADRID CHRIS
PO BOX 35 **COS Parcel:**
HARRISON, MT 59735-0035
NOTE: See the Owner tab for all owner information
Certificate of Survey:
Subdivision:
Legal Description:
S11, T02 S, R02 W, ACRES 202, W2NE4, SE4NW4, NE4SW4, NW4SE4, PT OF NE4SE4 & E2NE4

Last Modified: 7/16/2021 4:03:03 AM

General Property Information

Neighborhood: 225.009 **Property Type:** VAC_R - Vacant Land - Rural
Living Units: 0 **Levy District:** 25-2542-23FH
Zoning: **Ownership %:** 100

Linked Property: No linked properties exist for this property
Exemptions: No exemptions exist for this property
Condo Ownership: **Limited:** 0
General: 0



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cwatson@mt.net

Sprinklers

Sprinkler Brand <input type="radio"/> None <input checked="" type="radio"/> Nelson <input type="radio"/> Senninger <input type="radio"/> Komet	Pressure Gauge <input checked="" type="radio"/> 100 PSI <input type="radio"/> 30 PSI <input type="radio"/> 200 PSI <input type="radio"/> 60 PSI <input type="checkbox"/> End Gauge - 30 PSI	Design Sprinklers View Outlets Zone VRI OK Cancel
<input type="button" value="View Spans"/>		

System Information

GPM Per Acre: 7.7
 System GPM: 960.0
 Top of Inlet Pressure: 40.4
 Base of Inlet Pressure: 45.9
 Elevation Pressure Loss: 5.2
 System Loss: 20.2
 Electrical Frequency: 60 Hz

Flanged Side

Radius: 1723.0	End Gun Radius: 95.0
Coverage without End Gun: 1726.3	Coverage with End Gun: 1818.0
Side GPM: 960.0	End Gun GPM Delivered: 90.3
End Pressure: 15.0	End Gun GPM Required: 94.4
Boosted Pressure: 33.5	End Gun Pressure: 53.7
	End Gun Nozzle: .65

WATSON IRRIGATION SPECIALISTS

Work Sheet

Customer: CHRIS MADRID	Pivot: 1723	Acres: 122	Date: 5/5/2020
GPM For Pivot = 960		Water Source Elevation=	5107
		Highest Point in the Field Elevation=	5045
		Elevation From Water Source to Pivot Point:	-73

Pivot Info			
End Pressure	15	# X 2.31= TDH	34.7
Elevation Loss	5.2	# X 2.31= TDH	12.0
System Loss	20.2	# X 2.31= TDH	46.7
Top of Inlet Pressure	40.4	# X 2.31= TDH	93.3
Bottom of Inlet Pressure	45.9	# X 2.31= TDH	106.0
Additional GPM		TDH =	106.0

250 GPM For	863' REINKE	Pivot TDH=	106.0
GPM For			

Pipe Description	GPM	Pipe Size (In.)	Length (Ft.)	Friction Loss in PSI per 100'	Pounds (#)		
PVC	1210	12" PIP	1800	X 0.13	2.34	X 2.31 = TDH	5.4
PVC	960	12" PIP	1760	X 0.09	1.58	X 2.31 = TDH	3.7
	0	0	0	X 0	0.00	X 2.31 = TDH	0.0
	0	0	0	X 0	0.00	X 2.31 = TDH	0.0
	0	0	0	X 0	0.00	X 2.31 = TDH	0.0
						Pipe TDH =	9.1

Minor Friction Loss in Valves and Fittings	1.732	X 2.31 = TDH	4
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GPM for Screen=	Fall in Elevation	31.176	X 2.31 = TDH	72
	Rise in Elevation	0	X 2.31 = TDH	0

Total GPM=	960	Total Pressure=	20.39 #
Total TDH=	47.1		

BHP	
Efficiency (%) =	80%
(X TDH) / 3960 = HP X Efficiency = BHP	
BHP=	14.3

Pump Required	Yes	No
EXISTING		
Pump HP	RPM	Model
20	1770	5WBH
		NOL. Trim

Net Application Per 24 Hours =

(/ Acres) X .0533 = Gross Application X Efficiency =
Net Application

Efficiency (%)=	85%
-----------------	-----

GPM	960
Acres	122
Net Application =	0.36

Company: WATSON IRRIGATION SPECIALISTS

Name:

Date: 8/27/2021

**Pump:**

Size: 5WBH

Type: Clear Liquids

Synch speed: 1800 rpm

Curve: 5WBH18

Specific Speeds:

Dimensions:

Speed: 1770 rpm

Line: 8.44" x 13"

Impeller:

Ns: 3200

Nss: ---

Suction: 8 in

Discharge: 5 in

Search Criteria:

Flow: 960 US gpm

Head: 47 ft

Fluid:

Water

Density: 62.32 lb/ft³

Viscosity: 0.9946 cP

NPSHa: ---

Temperature: 68 °F

Vapor pressure: 0.3391 psi a

Atm pressure: 14.7 psi a

Motor:

Standard: NEMA

Enclosure: TEFC

Size: 15 hp

Speed: 1800

Frame: 254T

Sizing criteria: Max Power on Design Curve

Pump Limits:

Temperature: 250 °F

Pressure: 175 psi g

Sphere size: 0.75 in

Power: ---

Eye area: ---

--- Data Point ---

Flow: 960 US gpm

Head: 47.1 ft

Eff: 80%

Power: 14.2 hp

NPSHr: 12.1 ft

--- Design Curve ---

Shutoff head: 61 ft

Shutoff dP: 26.4 psi

Min flow: 200 US gpm

BEP: 83% @ 1118 US gpm

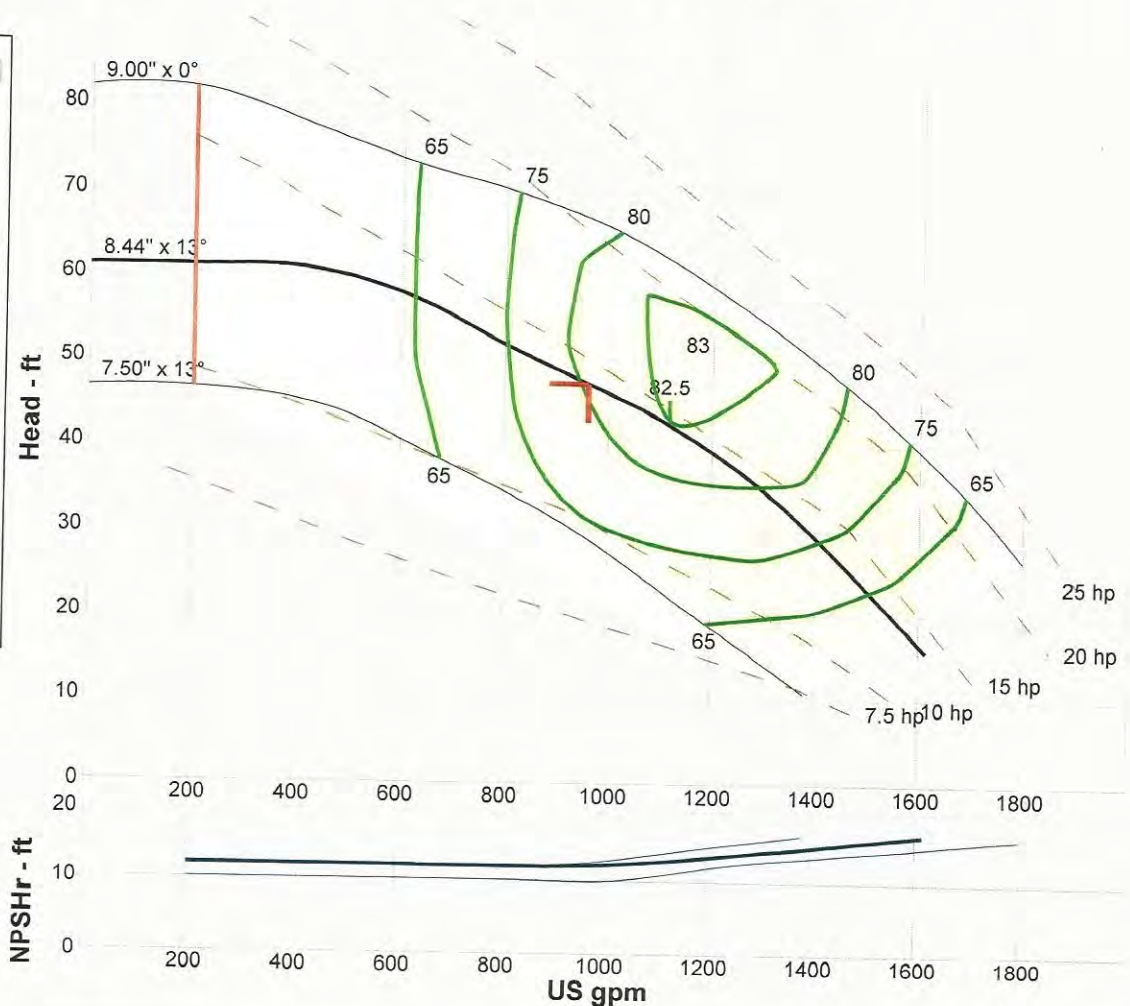
NOL power:

14.5 hp @ 1118 US gpm

-- Max Curve --

Max power:

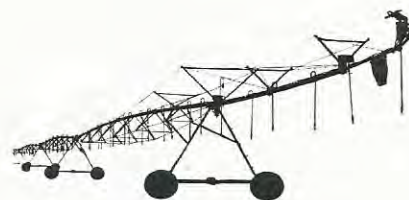
22.9 hp @ 1798 US gpm

**Performance Evaluation:**

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
1152	1770	40.9	82	14.4	13
960	1770	47.1	80	14.2	12.1
768	1770	52.7	73	14	12
576	1770	58.1	61	13.7	12
384	1770	60.8	45	13.2	12

**ELECTROGATOR II™****Irrigation System Purchase Agreement**

1723' REINKE UPPER DITCH - 8/27/2021

PRICES EFFECTIVE: August 01, 2021**Customer Information**

CHRIS MADRID

PO BOX 35

Harrison, Montana, USA 59735

Legal: NE 1/4 S11, T02 S, R02 W MADISON COUNTY

Mailing: PO BOX 35

City/State: Harrison, Montana, USA 59735

Email:

Phone:

Dealer Information

2307510.WC

Watson Irrigation Specialists

7837 Hwy. 287

Townsend, MT 59644

PO #:

FAX: 406-266-4498

Mobile: 406-439-5850

Email: cwatson@mt.net

Phone: 406-266-3741

System Information**System Type: Center Pivot**

System GPM: 960.0 GPM

Max. System GPM: 958.5 GPM

Elevation: 12' feet

Top of Inlet Pressure: 40.4 PSI

End Pressure: 15 PSI

Hours to Apply 1": 58.4 Hours

Model: E2065-G / 57"

System Length: 1723'

Min. System GPM: 868.2 GPM

System Acres: 111.8 Acres

End Gun Acres: 6.1 Acres

Total Acres: 117.9 Acres

Span Information

Number	Type	Length	Ext	Spacing	Wheel Track	Tire Size	PSI Loss	Span Cable
1	E2065	156'	N	57"	158'	11.2 x 38	3.1	10C/#10/0s
2	E2065	156'	N	57"	314'	11.2 x 38	3	10C/#10/0s
3	E2065	156'	N	57"	470'	11.2 x 38	2.8	10C/#10/0s
4	E2065	156'	N	57"	626'	11.2 x 38	2.6	10C/#10/0s
5	E2065	156'	N	57"	782'	11.2 x 38	2.3	10C/#10/0s
6	E2065	156'	N	57"	938'	11.2 x 38	1.9	10C/#10/0s
7	E2065	156'	N	57"	1094'	11.2 x 38	1.5	10C/#10/0s
8	E2065	156'	N	57"	1250'	11.2 x 38	1.1	10C/#10/0s
9	E2065	156'	N	57"	1406'	11.2 x 38	0.8	10C/#10/0s
10	E2065	156'	N	57"	1562'	11.2 x 38	0.4	10C/#10/0s
11	E2065	137'	N	57"	1699'	11.2 x 38	0.1	10C/#10/0s
EB	E2060	23'	N	57"	1723'		0.5	

Irrigation System Purchase Agreement

Dealer: Watson Irrigation Specialists - 2307510.WC

Customer: CHRIS MADRID

August 27, 2021

Page 1 of 5

Watson Irrigation Specialists

1723' REINKE UPPER DITCH

System Components

Qty	Description
1	Pivot Center, Galvanized
1	Pivot Riser 8" For 6" Nelson 800P Valve
1	JOINT PIVOT E2065
1	Filter, Mainline, 1200 GPM Maximum
1	Walkway - Pivot Center Platform
1	RPM Preferred Touch Screen MCP
1	Auxiliary Receptacle Kit
1	Lightning Arrestor
1	Low Pressure Safety Shutdown
1	GPS CDW MCP KIT
1	GPS End of System Control
1	Temperature Probe-RPM Advanced
10	Spans, 156', 6 5/8" dia., Galvanized Pipe, 57" Outlet Spacing
10	JOINT SPAN E2065
10	Long System Alignment Package
1	Spans, 137', 6 5/8" dia., Galvanized Pipe, 57" Outlet Spacing
1	LAST TWR TOP E2065
11	Tower Assembly, Galvanized, Standard Profile
11	WHL-TIRE TUBE 11.2 X 38 ND 2WL
11	REINKE GEAR 1016-NON TOW
11	Helical Center Drive-Std Speed-EII
1	Auto Reverse, Tower Option
1	End Boom, 23', Galvanized Pipe
1	End Gun, Nelson SR100 with 800 Valve, Automatic Controls
1	Strainer - Last Tower Top, Flange Mount
1	Booster Pump, End Gun, 2 Hp
1	Light Assembly, End Tower, Standard
23	NELSON R3030 D10 OLIVE
152	Pressure Regulators, Nelson 10 PSI
152	GOOSENCK 3/4MNPT X BARB-SNG180
152	WEIGHT-DROP .85 LB NEL SLIM
129	NELSON S3030 D8 YELLOW
2	Barricade, Tower Auto Stop/Auto Reverse, Movable
2	TRAILING TIRE PLATE OPT-1 EACH
1	Light Assembly, Pivot Center, Standard
1	VZN RC10DV PREFERRED
1	Nelson 800 Series 6"Medium pressure (80 PSI) sleeve

Miscellaneous Items

Description	Price
16' WIS GRAVITY SCREEN W/BYPASS 12" LH	\$9,950.00
12" UNDERGROUND VALVE	\$1,141.00
3560 12" 80# PIP PIPE INSTALLED 16.65 Estimated	\$59,274.00
CREEK CROSSING ESTIMATED	\$2,500.00
PUMP STAND AT PIVOT WITH PUMP OUT AND VALVE	\$1,350.00
TYE INTO PIVOT	\$1,050.00
NEW METER SERVICE NWE WITH DISCONNECT	\$2,650.00
100' WIRE AND TRENCH METER TO PIVOT	\$400.00
5 WBH 20 HP CORNELL 1800 RPM	\$7,585.00
SIZE 2 PUMP PANEL	\$1,200.00
WIRING	\$1,150.00
GARBAGE REMOVAL	\$400.00
////////////////////////////////////	\$0.00
Screen Box moved to upper ditch and 260' more	\$0.00
12" #80 PIP PVC Pipe 16.65 Estimated	\$4,329.00

Total: \$92,979.00

Investment

Customer Price	\$120,712.76 T
Installation	\$11,618.75 T
Freight	\$3,975.00 T
+ Pivot Pad	\$2,575.00 T
Miscellaneous Items	\$92,979.00 T
Price	\$231,860.51

- Trade-In	\$0.00 T
Sub-Total	\$231,860.51
Sales Tax (%)	\$0.00
Total Price	\$231,860.51

Down Payment	\$0.00
Due on Delivery	\$0.00
Due on Installation	\$231,860.51

Payment Terms Cash

Payment shall be as indicated above. Prices subject to change without notice. If Customer requests changes in the system or delays progress of the manufacture or shipment of the system, the system price shall be adjusted to reflect increases caused thereby. In addition, the system price is subject to revision due to increases in material and labor costs during the period from the date of this purchase order until completion of manufacture of the system.

Terms

This order is subject to the ability of the Dealer to obtain said equipment from the manufacturer, and Dealer shall be under no liability if delivery of the equipment is delayed due to labor disturbances, lack of transportation facilities, casualty, war, civil commotion, government orders or reservations, or other causes beyond Dealer control. In the event Dealer cost for said equipment at the time fixed for delivery has increased above its cost as of the date of this contract, the price will be adjusted to the price list in effect at the time of delivery. In such case, the Purchaser shall have the privilege of accepting delivery at such increased price or of canceling this contract by giving written notice of such cancellation to the Dealer within five days after notice of such price increase. Upon such cancellation and reimbursement from Dealer for any payments theretofore received by Dealer from Purchaser hereunder the sale shall stand rescinded. If Purchaser does not cancel this contract within said five-day period, a new order shall be written to reflect the new price and which said order shall supersede this instrument. After delivery by Dealer, all equipment and work in process shall be at the risk of Purchaser. The accuracy of "Reinke Irrigation System Sprinkler Package", if purchased here-in, depends entirely on the completeness and accuracy of information provided.

Although described as one of the 'Options And Accessories' in this Purchase Agreement, if the configuration of the System requires installation of barricades for safe operation, Reinke Manufacturing strongly recommends that Dealer includes Barricades in this Purchase Agreement. If barricades are so required, and Reinke Manufacturing barricades are not included as part of this Purchase Agreement, by signing below, Purchaser agrees

(a) To release Reinke Manufacturing, and the Reinke dealer, their agents, successors, and assigns of from any and all claims, causes of action, damages or liabilities resulting directly or indirectly from the deletion of the Barricades from this Purchase Agreement; and

(b) To indemnify and hold Reinke Manufacturing and the Reinke dealer harmless from and against any and all claims, causes of action, damages or liabilities resulting directly or indirectly from the deletion of the Barricades from this Purchase Agreement and the failure of the Purchaser to provide a substantial barricade prior to the operation of the Reinke system.

THE UNDERSIGNED PURCHASER AGREES THAT HE HAS READ THE TERMS SET FORTH ABOVE AND AGREES TO BE BOUND TO SUCH TERMS.

The dealer has provided me with a copy of the Reinke Irrigation Systems Warranty. I acknowledge receipt of the Warranty and have read the terms contained in the Warranty. _____ (Initial)

Purchaser Signature _____

Date _____

Dealer Signature _____

Date _____



Watson Irrigation Specialists, Inc.
 7837 Hwy 287 Townsend, MT 59644
 1-800-654-2845 Or (406)266-3741 Fax- (406)266-4498
cwatson@mt.net

Project Costs UPPER DITCH

Total Acres=	121
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System/Infrastructure	Acres	Cost	Cost/Acre
1723' REINKE	121	\$ 231,860.51	\$ 1,916.20
Total=		\$ 231,860.51	\$ 1,916.20

DIRT WORK, CROSSINGS, PIVOT OBSTACLES REMOVALL, BARRICADE PLACEMENT, AND PERMITS ARE NOT INCLUDED UNLESS SPECIFIED IN PROPOSAL INITIAL _____

PIPE INSTALLATION IS PRICED PER FOOT IN FARMABLE FIELD WITH 30" OF COVER AND BACKFILLED WITH THE MATERIAL THAT IS THERE MOUNDED OVER PIPE TO SETTLE OR BE FARMED IN BY CUSTOMER. EXTRA COSTS WILL BE DISCUSSED AND ADDED IF INSTALLER ENCOUNTERS HARD ROCK DIGGING, IMPASSABLE ROCK, GROUNDWATER ADDING BEDDING MATERIAL AND HARD ACCSESS AREAS. INTIAL _____

SPECIAL PROVISIONS _____

PURCHASER SIGNATURE _____ DATE _____

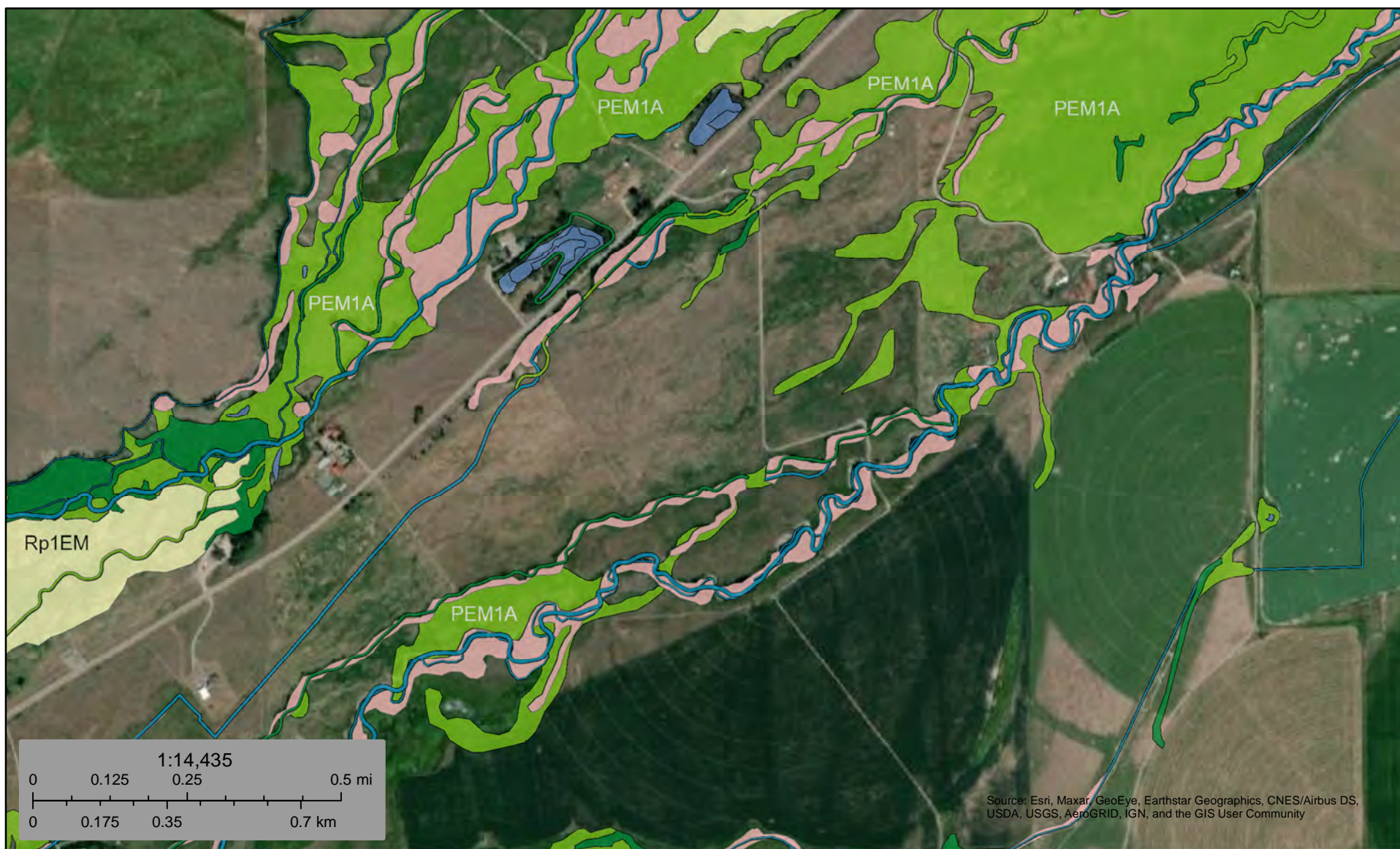
DEALER SIGNATURE _____ DATE _____



U.S. Fish and Wildlife Service

National Wetlands Inventory

Madrid_Pivot Installation



September 29, 2021

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

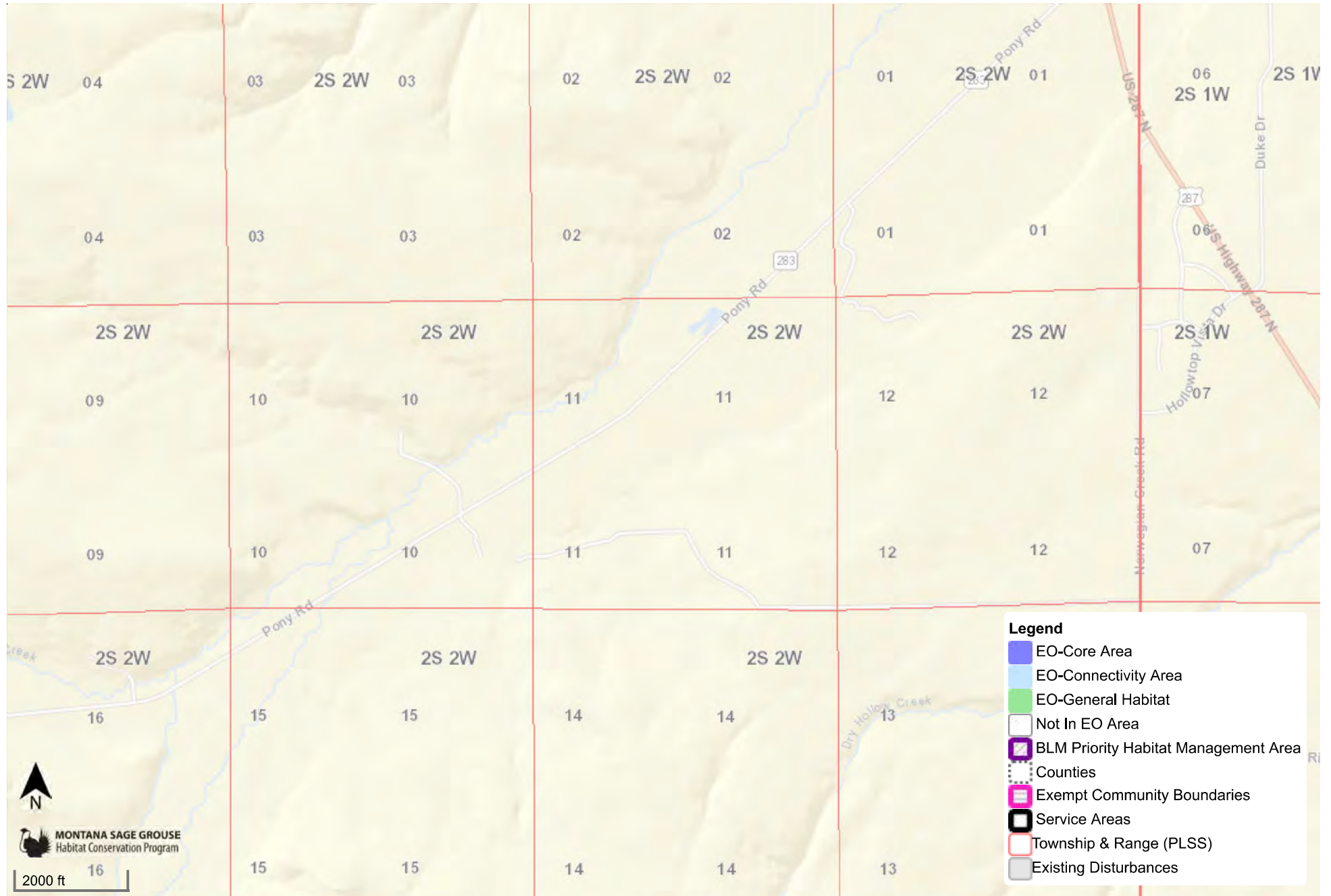
Freshwater Pond

Lake

Other

Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



MAMMALS (MAMMALIA)

TOWNSHIP = 002S002W (based on mapped Species Occurrences)

SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS	USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN MT	% OF MT THAT IS BREEDING RANGE
Corynorhinus townsendii Townsend's Big-eared Bat	Vespertilionidae Bats	G4	S3		Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO)	SENSITIVE	SGCN3	5%	87%
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Fergus, Flathead, Gall, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Madison, McCone, Meagher, Mineral, Missoula, Musselshell, Park, Phillips, Powder River, Powell, Prairie, Rosebud, Sanders, Silver Bow, Stillwater, Treasure, Valley, Yellowstone State Rank Reason: Species is widespread, but uncommon and appears to occur at low densities. Disturbance of cave and mine roosts and the hard closure of o term persistence.									
Gulo gulo Wolverine	Mustelidae Weasels	G4	S3		Proposed on Forests (BD, BRT, CG, HLC, KOOT, LOLO)	SENSITIVE	SGCN3	0%	37%
Species Occurrences verified in these Counties: Beaverhead, Broadwater, Carbon, Cascade, Deer Lodge, Flathead, Gallatin, Glacier, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Park, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Wheatland									
Ursus arctos Grizzly Bear	Ursidae Bears	G4	S2S3	PS: LT; XN	Threatened on Forests (BD, CG, HLC, KOOT, LOLO)	THREATENED	SGCN2-3	1%	22%
Species Occurrences verified in these Counties: Beaverhead, Broadwater, Carbon, Cascade, Chouteau, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Granite, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Meagher, Mineral, Missoula, Park, Pondera, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Yellowstone									

BIRDS (AVES)

TOWNSHIP = 002S002W (based on mapped Species Occurrences)

SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS	USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN MT	% OF MT THAT IS BREEDING RANGE
Ardea herodias Great Blue Heron	Ardeidae Bitterns / Egrets / Herons / Night-Herons	G5	S3	MBTA			SGCN3	3%	100%
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fergus, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, McCone, Meagher, Mineral, Missoula, Musselshell, Park, Pondera, Powder River, Powell, Prairie, Ravalli, Richland, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Wibaux, Yellowstone State Rank Reason: Small breeding population size, evidence of recent declines, and declining regeneration of riparian cottonwood forests due to altered hydrology									
Coccothraustes vespertinus Evening Grosbeak	Fringillidae Finches	G5	S3	MBTA; BCC10			SGCN3	3%	100%
Species Occurrences verified in these Counties: Beaverhead, Broadwater, Carbon, Carter, Cascade, Chouteau, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Musselshell, Park, Pondera, Powder River, Powell, Ravalli, Sanders, Silver Bow, Stillwater, Wheatland State Rank Reason: Populations in Montana and across North America have experienced rangewide declines, although the causes of these declines are unclear (Baker 1997)									
Coccyzus americanus Yellow-billed Cuckoo	Cuculidae Cuckoos	G5	S3B	PS: LT; MBTA	Threatened on Forests (BRT, LOLO)	THREATENED	SGCN3, SGIN	1%	50%
Species Occurrences verified in these Counties: Big Horn, Carbon, Carter, Chouteau, Custer, Gallatin, Lake, Madison, Missoula, Phillips, Powder River, Richland, Stillwater, Yellowstone									
Nucifraga columbiana Clark's Nutcracker	Corvidae Jays / Crows / Magpies	G5	S3	MBTA	Species of Conservation Concern on Forests (FLAT)		SGCN3	9%	84%
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Deer Lodge, Fergus, Flathead, Gallatin, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, McCone, Meagher, Mineral, Missoula, Musselshell, Park, Petroleum, Phillips, Pon Ravalli, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Wheatland, Yellowstone									
Spizella breweri Brewer's Sparrow	Passerellidae New World Sparrows	G5	S3B	MBTA		SENSITIVE	SGCN3	12%	100%
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fe Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Lake, Lewis and Clark, Liberty, Lincoln, Madison, McCone, Meagher, Missoula, Musselshell, Park, Petroleum, Phillips, Powder River, Powell, Prairie, Ravalli, Richland, Roosevelt, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Yellowstone State Rank Reason: Species faces threats from loss of sagebrush habitats it is dependent on as a result of habitat conversion for agriculture and increased frequency of encroachment and drought.									

AMPHIBIANS (AMPHIBIA)

TOWNSHIP = 002S002W (based on mapped Species Occurrences)

SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS	USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN MT	% OF MT THAT IS BREEDING RANGE
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Anaxyrus boreas Western Toad	Bufonidae True Toads	G4	S2		Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO)	SENSITIVE	SGCN2	6%	38%
Species Occurrences verified in these Counties: Beaverhead, Chouteau, Deer Lodge, Flathead, Gallatin, Glacier, Granite, Jefferson, Judith Basin, Lake, Lewis and Clark, Mineral, Missoula, Park, Pondera, Powell, Ravalli, Sanders, Silver Bow, Teton State Rank Reason: Over the last few decades this species has undergone serious declines in abundance due primarily to infection with Chytrid fungus. While distribution appears to have stabilized in the last decade, changes to abundance across the species range within Montana remain unknown. Significant threats to the species remain from continued impacts of disease and mortality of adults and young during breeding and local migration.									

Potential Species of Concern

Special Status Species

Special Status Species 1 Species Filtered by the following criteria: Township = 002S002W (based on mapped Species Occurrences)
--

BIRDS (AVES)									
TOWNSHIP = 002S002W (based on mapped Species Occurrences)									
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS	USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN MT	% OF MT THAT IS BREEDING RANGE
Haliaeetus leucocephalus Bald Eagle	Accipitridae Hawks / Kites / Eagles	G5	S4	DM; BGEPA; MBTA	Sensitive - Known on Forests (BD, BRT, CG, HLC, KOOT, LOLO)	SENSITIVE		2%	100%
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fergus, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, McCona, Meagher, Mineral, Missoula, Petroleum, Phillips, Pondera, Powder River, Powell, Prairie, Ravalli, Richland, Roosevelt, Rosebud, Sanders, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Tribble, Wibaux, Yellowstone State Rank Reason: Populations numbers have steadily increased since the 1980s and breeding pairs now occupy a high percentage of suitable habitat across the state, and are still protected under the Bald and Golden Eagle Protection Act of 1940.									

Additions To Statewide List

Species Removed From Statewide List

Species of Greatest Inventory Need

Citation for data on this website:
Montana Animal Species of Concern Report. Montana Natural Heritage Program and Montana Fish, Wildlife and Parks. Retrieved on 9/29/2021, from mtnhp.org/SpeciesOfConcern/?AorP=a



United States
Department of
Agriculture

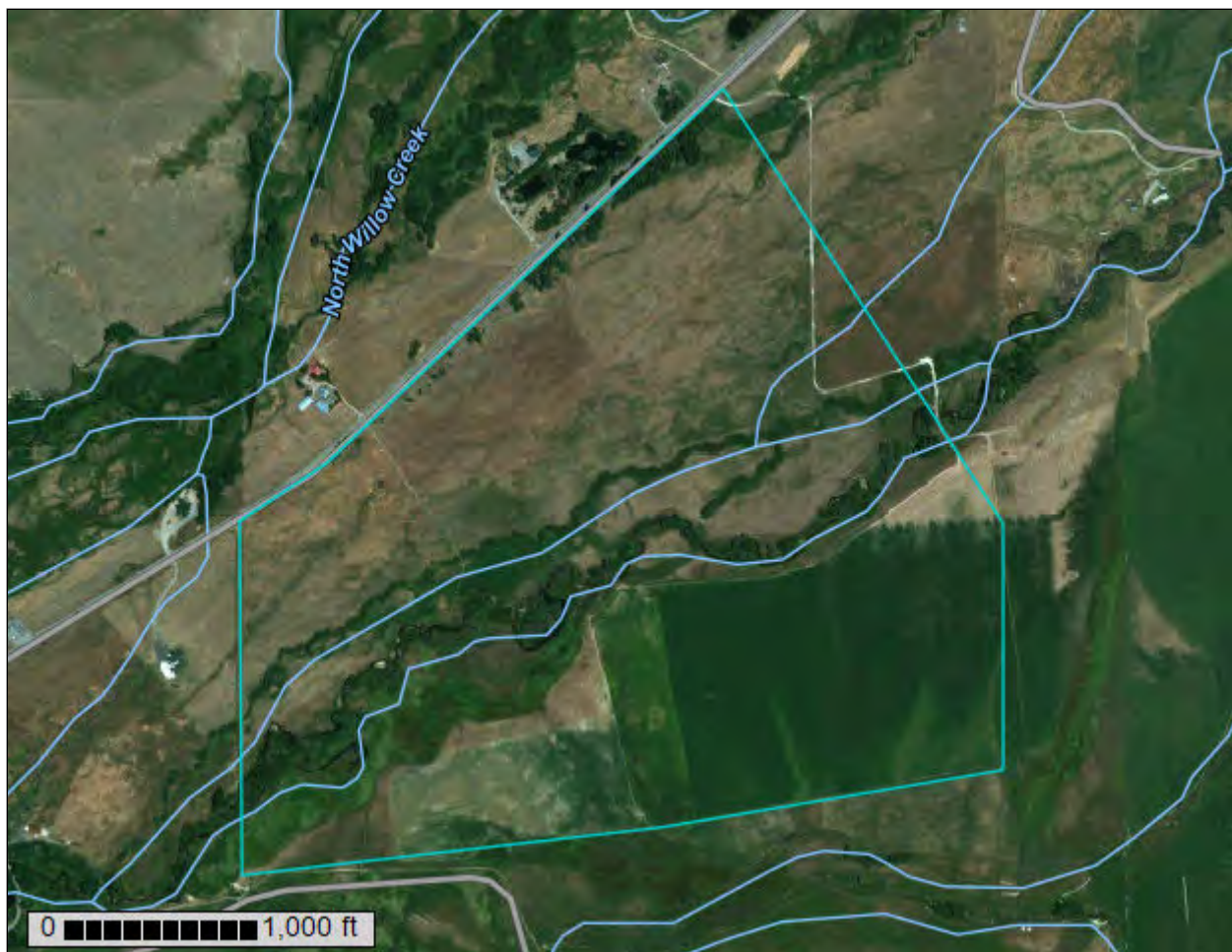
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Madison County Area, Montana**

Madrid Pivot Installation



September 28, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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 325—Groff-Chaffee, occasionally flooded-Pleine, frequently ponded,
 families, complex, 0 to 4 percent slopes..... 14

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

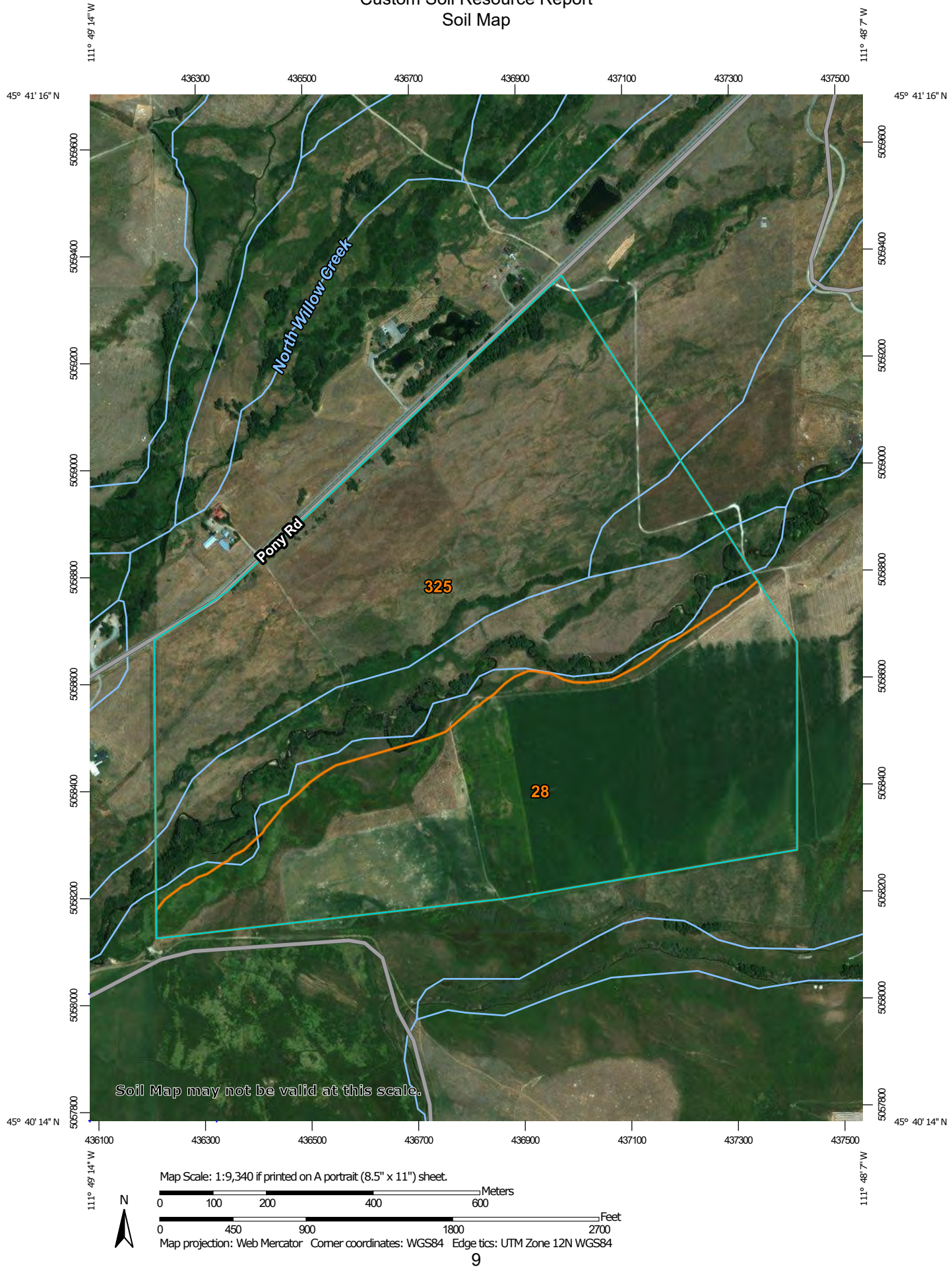
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


Custom Soil Resource Report
Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip


 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Madison County Area, Montana
Survey Area Data: Version 23, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 14, 2015—Sep 28, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
28	Brocko silt loam, cool, 2 to 12 percent slopes	97.3	40.0%
325	Groff-Chaffee, occasionally flooded-Pleine, frequently ponded, families, complex, 0 to 4 percent slopes	145.9	60.0%
Totals for Area of Interest		243.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

Custom Soil Resource Report

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Custom Soil Resource Report

Madison County Area, Montana**28—Brocko silt loam, cool, 2 to 12 percent slopes****Map Unit Setting***National map unit symbol: 4xd6**Elevation: 2,500 to 6,500 feet**Mean annual precipitation: 10 to 14 inches**Mean annual air temperature: 37 to 45 degrees F**Frost-free period: 90 to 135 days**Farmland classification: Farmland of local importance***Map Unit Composition***Brocko and similar soils: 85 percent**Minor components: 15 percent**Estimates are based on observations, descriptions, and transects of the mapunit.***Description of Brocko****Setting***Landform: Stream terraces, alluvial fans**Down-slope shape: Linear**Across-slope shape: Linear**Parent material: Coarse-silty alluvium and/or eolian deposits***Typical profile***A - 0 to 4 inches: silt loam**Bk1 - 4 to 12 inches: silt loam**Bk2 - 12 to 60 inches: silt loam***Properties and qualities***Slope: 2 to 12 percent**Depth to restrictive feature: More than 80 inches**Drainage class: Well drained**Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)**Depth to water table: More than 80 inches**Frequency of flooding: None**Frequency of ponding: None**Calcium carbonate, maximum content: 35 percent**Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)**Available water supply, 0 to 60 inches: High (about 11.0 inches)***Interpretive groups***Land capability classification (irrigated): 4e**Land capability classification (nonirrigated): 4e**Hydrologic Soil Group: B**Ecological site: R044BA032MT - Loamy (Lo) LRU 44B-A**Hydric soil rating: No***Minor Components****Nuley***Percent of map unit: 4 percent**Landform: Structural benches, hills**Down-slope shape: Linear*

Custom Soil Resource Report

Across-slope shape: Linear
Ecological site: R044XS335MT - Sandy (Sy) 9-14" p.z.
Hydric soil rating: No

Crago

Percent of map unit: 4 percent
Landform: Terraces, alluvial fans
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R044XS341MT - Limy (Ly) 9-14" p.z.
Hydric soil rating: No

Varney

Percent of map unit: 4 percent
Landform: Alluvial fans, stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R044XS339MT - Silty (Si) 9-14" p.z.
Hydric soil rating: No

Soils with cobbly surfaces

Percent of map unit: 3 percent
Ecological site: R044XS339MT - Silty (Si) 9-14" p.z.
Hydric soil rating: No

325—Groff-Chaffee, occasionally flooded-Pleine, frequently ponded, families, complex, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2z1dt
Elevation: 4,260 to 5,580 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 41 to 46 degrees F
Frost-free period: 90 to 110 days
Farmland classification: Not prime farmland

Map Unit Composition

Groff and similar soils: 40 percent
Chaffee, occasionally flooded, and similar soils: 20 percent
Pleine, frequently ponded, and similar soils: 15 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Groff

Setting

Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

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Typical profile

A1 - 0 to 18 inches: silt loam
A2 - 18 to 28 inches: loam
C1 - 28 to 33 inches: gravelly loamy coarse sand
C2 - 33 to 60 inches: very gravelly coarse sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.71 to 2.13 in/hr)
Depth to water table: About 24 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C
Ecological site: R044BY150MT - Subirrigated (Sb) LRU 44B-Y
Hydric soil rating: No

Description of Chaffee, Occasionally Flooded**Setting**

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium

Typical profile

A - 0 to 12 inches: loam
Ag - 12 to 16 inches: fine sandy loam
Bg - 16 to 40 inches: fine sandy loam
2Cg - 40 to 60 inches: very cobbly sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.71 to 2.13 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: R044BY080MT - Riparian Meadow (RM) LRU 44B-Y

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Hydric soil rating: No

Description of Pleine, Frequently Ponded**Setting**

Landform: Bogs
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium

Typical profile

Oa - 0 to 9 inches: muck
Bg1 - 9 to 20 inches: very fine sandy loam
Bg2 - 20 to 33 inches: fine sandy loam
C - 33 to 60 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
 (1.42 to 7.09 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): 6w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: A/D
Ecological site: R044BY181MT - Wet Meadow (WM) LRU 44B-Y
Hydric soil rating: Yes

Minor Components**Water**

Percent of map unit: 10 percent
Hydric soil rating: Unranked

Mollic fluvaquents, occasionally flooded

Percent of map unit: 10 percent
Landform: Flood plains, oxbows
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R044BY080MT - Riparian Meadow (RM) LRU 44B-Y
Hydric soil rating: Yes

Manhattan

Percent of map unit: 5 percent
Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R044BA110MT - Sandy (Sy) LRU 44B-A
Hydric soil rating: No

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Breeann M. Johnson, Esq.
Alison P. Garab, Esq.
Western Roots Law PLLC
PO Box 1432
Belgrade, Montana 59714
BMJ: 406.600.9389
Johnson@WestRootsLaw.com
APG: 406.579.9584
Garab@WestRootsLaw.com

*Attorneys for 1989 Poole Family Living Trust –
Survivor's Trust and Ingrid P. Williams, Trustee*

MONTANA WATER COURT, UPPER MISSOURI DIVISION
JEFFERSON RIVER
BASIN 41G

NOTICE OF SUBSTITUTION OF APPEARING PARTY

Following conveyance of the water right claim listed below from the 1989 Poole Family Living Trust – Survivor's Trust and Ingrid P. Williams, Trustee ("Poole-Williams") to Chris and Jena Madrid ("Madrid") (Madison County Document No. 186977, recorded Dec. 9, 2019) notice is hereby given that Poole-Williams is hereby substituted by Madrid as an Appearing Party. Exhibit A: Water Right Ownership Update submitted to DNRC December 12, 2019.

1. Claim No.: 41G 195408-00
2. County: Madison
3. Source: South Willow Creek
4. Substituted Appearing Party's Name, Address, and Phone Number:

Chris & Jena Madrid
PO Box 35
Harrison, MT 59735
406.600.5196

5. It is requested that copies of all filings, notices, pleadings, and orders be served on Madrid
at the following address:

Chris & Jena Madrid
PO Box 35
Harrison, MT 59735
cmadridmontana@gmail.com

DATED this 27th day of December, 2019.

WESTERN ROOTS LAW PLLC

/s/ Breeann M. Johnson
Breeann M. Johnson

CERTIFICATE OF SERVICE

I hereby certify that on this 27th day of December, 2019, a true and correct copy of the foregoing document was served upon the following parties in the manner set forth below:

Montana Water Court PO Box 1389 Bozeman, MT 59771-1389 406.586.4364	<input type="checkbox"/> U.S. First-Class Mail, Postage Prepaid X Email: watercourt@mt.gov <input type="checkbox"/> Hand Delivery: <input type="checkbox"/> Other:
Chris & Jena Madrid PO Box 35 Harrison, MT 59735	X U.S. First-Class Mail, Postage Prepaid X Email: cmadridmontana@gmail.com <input type="checkbox"/> Hand Delivery: <input type="checkbox"/> Other:
Michelle (Shelly) Van Haur 4450 Winifred Hwy. Hilger, MT 59451	X U.S. First-Class Mail, Postage Prepaid <input type="checkbox"/> Email: <input type="checkbox"/> Hand Delivery: <input type="checkbox"/> Other:

/s/ Breeann M. Johnson
Breeann M. Johnson

RALPH W. STEELE, P.C.

ATTORNEY AT LAW
a professional corporation

202 West Main Street, Suite 201
Bozeman, Montana 59715

Ralph W. Steele
www.steelelawmt.com

EXHIBIT A

Telephone: (406) 582-9986
Telefax: (406) 582-9995
E-mail: rsteele@steelelawmt.com

December 12, 2019

DNRC
2273 Boot Hill Court, Suite 110
Bozeman, MT 59715

RE: Water Right Ownership Update
Ingrid P. Williams, Trustee of the 1989 Poole Family Living Trust-Survivor's
Trust to Chris and Jena Madrid

To Whom it may concern:

Please find enclosed the following documents with regard to the above referenced update:

1. DNRC Water Right Ownership Update Form 608;
2. Joint Tenancy Warranty Deed recorded in Madison County as Document #186977 on December 9, 2019;
3. Check # 1505 in amount of Eighty and no/100 Dollars (\$80.00) for the filing fee associated with this transfer.

Should you have any questions or need any additional information please do not hesitate to contact me. Thank you for your assistance in this matter.

Yours very truly,

RALPH W. STEELE, P.C.



Ralph W. Steele

RWS/lzc

Enclosures: as noted

cc: Breeann M. Johnson; Ingrid Poole Williams w/enclosures (via email only)

13-16-S

Form 608 Revised 03/2019

File in WR# _____

DNRC WATER RIGHT OWNERSHIP UPDATE

This form is for DNRC record keeping purposes only
as required by § 85-2-101(2), MCA.

The deed is the legal document transferring the
water right.

Use a new form for each deed transaction.

Mail the completed form and fee to your local water
resources office at the address on the next page.

Filing Fee

\$50.00 for 1 water right and \$10.00 for each
additional right up to a maximum of \$300.00.

Make checks payable to DNRC

FOR DEPARTMENT USE ONLY

Rec'd By _____

Fee Rec'd \$ _____ Check No. _____

Payor _____

Refund \$ _____ Date _____

Deposit Receipt # _____

Coder _____ RO# _____ OUID# _____

For complete information, see file: _____

1. **SELLER (Grantor)** Ingrid P. Williams, Trustee of the 1989 Poole Family Living Trust - Survivor's Trust
MAILING ADDRESS 1028 Savoy Street
CITY San Diego STATE CA ZIP 92107
PHONE 406.600.9389 EMAIL Johnson@WestRootsLaw.com

2. **BUYER (Grantee)** Chris and Jena Madrid
MAILING ADDRESS PO Box 35
CITY Harrison STATE MT ZIP 59735
PHONE 406.600.5196 EMAIL cmadridmontana@gmail.com

3. **CLOSING / CONTACT INFORMATION**
DATE OF CLOSING: 12/9/2019 If applicable, provide your file number: _____
NAME Ralph Steele ADDRESS 202 W. Main St., Ste. 201, Bozeman, MT 59715 PHONE # 406.582.9986

4. **ATTACH A COPY OF A RECORDED DEED OR OTHER DOCUMENT OF CONVEYANCE SHOWING TRANSFER OF THE PROPERTY / WATER RIGHTS AND DNRC WILL PROCESS THE FORM. IF NO DEED IS ATTACHED, DNRC WILL WAIT FOR TRANSFER INFORMATION FROM DEPARTMENT OF REVENUE TO PROCESS THE UPDATE.**

5. **LIST ALL WATER RIGHTS THAT REQUIRE UPDATED OWNERSHIP. Attach a list if additional space is needed.**

**If the buyer did not receive 100% of the seller's interest in the water rights, do not use this form. File Form 641.*

County	Geocode of Property being Transferred	Water Right Number
Madison	25-0789-02-4-04-01-0000	41G 195408-00
	25-0789-11-2-01-05-0000	41G 195409-00
	25-0789-11-1-01-01-0000	41G 194547-00
	25-0789-12-3-01-01-0000	41G 194548-00
	Please refer to attached deed for	
	exact legal descriptions of the	
	property being transferred to Madrid.	

Return To:
Security Title Company
P.O. Box 6550
Bozeman, MT 59771-6550

① STC M-19-2163

STATE OF MONTANA
 COUNTY OF MADISON
 DEED

Doc #: 186977 Pages: 2 Book: Page:

STATE OF MONTANA MADISON COUNTY

Recorded 12/9/2019 3:00 PM KOI: DEED

Kathleen Mumme, CLERK & RECORDER

Fee: \$ 14.00

To: SECURITY TITLE, PO BOX 6550, BOZEMAN MT 59771

JOINT TENANCY WARRANTY DEED

FOR VALUE RECEIVED, INGRID P. WILLIAMS, Trustee of the 1989 Poole Family Living Trust-Survivor's Trust, the Grantor, does hereby grant, bargain, sell, convey and confirm unto CHRIS MADRID and JENA MADRID of PO Box 35, Harlow, Montana 59735, the Grantees, as joint tenants with right of survivorship (and not as tenants in common), the following described premises in Madison County, Montana, to-wit:

PARCEL I:

Township 2 South, Range 2 West, P.M.M., Madison County, Montana

Section 2: W $\frac{1}{4}$ SE $\frac{1}{4}$
 SE $\frac{1}{4}$ SE $\frac{1}{4}$

Section 11: East 970 Feet of the E $\frac{1}{4}$ NE $\frac{1}{4}$
 East 970 Feet of the NE $\frac{1}{4}$ SE $\frac{1}{4}$

Section 12: W $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$
 W $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$

Deed Reference in Book 249 of Deeds, Page 762, records of Madison County, Montana

EXCEPTING THEREFROM all of that portion of the above described property lying within and North of that tract of land conveyed to The Northern Pacific and Montana Railroad Company by Quit Claim Deed dated November 23, 1889 and recorded January 4, 1890 in Book 48 of Deeds, Page 285, records of Madison County, Montana.

PARCEL II:

Township 2 South, Range 2 West, P.M.M., Madison County, Montana

Section 11: N $\frac{1}{4}$ NW $\frac{1}{4}$
 SE $\frac{1}{4}$ NW $\frac{1}{4}$
 W $\frac{1}{4}$ NE $\frac{1}{4}$
 NE $\frac{1}{4}$ SW $\frac{1}{4}$
 NW $\frac{1}{4}$ SE $\frac{1}{4}$
 and a strip of land 350 feet in width off of the West side of the NE $\frac{1}{4}$ SE $\frac{1}{4}$ and off of the West side of the E $\frac{1}{4}$ NE $\frac{1}{4}$

Deed Reference in Book 110 of Deeds, Page 464, records of Madison County, Montana

EXCEPTING THEREFROM that portion conveyed to the Northern Pacific and Montana Railroad Company, a corporation, by Deed, recorded December 8, 1889, in Book 48 of Deeds, Page 548, records of Madison County, Montana.

FURTHER EXCEPTING THEREFROM that portion conveyed to the Northern Pacific and Montana Railroad Company, a corporation, in Quitclaim Deed, recorded December 12, 1891, in Book 50 of Deeds, Page 450, records of Madison County, Montana.

FURTHER EXCEPTING THEREFROM that portion conveyed to the State

of Montana, by Deed, recorded September 15, 1945, in Book 144 of Deeds, Page 248, records of Madison County, Montana.

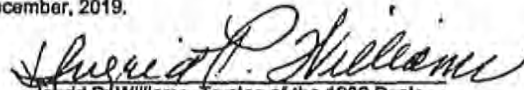
FURTHER EXCEPTING THEREFROM that portion conveyed to The State Highway Commission of the State of Montana, by Right of Way Deed, recorded November 16, 1945, in Book 144 of Deeds, Page 370, records of Madison County, Montana.

FURTHER EXCEPTING THEREFROM that portion conveyed to the State of Montana, by Quit Claim Deed, recorded December 19, 1945, in Book 144 of Deeds, Page 438, records of Madison County, Montana.

SUBJECT TO: all reservations and restrictions in prior conveyances or in patents from the United States or the State of Montana; existing easements, encroachments and rights of way of record and those which would be disclosed by an examination of the property; mineral, oil and gas reservations, conveyances and leases of record; all real property taxes and assessments for the current year and subsequent years; and all building and use restrictions, covenants, agreements, requirements, notices, waivers, and conditions of record.

TO HAVE AND TO HOLD the said premises, with their tenements, hereditaments, and appurtenances unto the said Grantees as joint tenants with right of survivorship (and not as tenants in common) forever. And the said Grantor does hereby covenant to and with the said Grantees that Grantor is the owner in fee simple of said premises; that Grantees shall enjoy the same without any lawful disturbance; that the same is free from all encumbrances except those limitations set forth above; that the Grantor and all persons acquiring any interest in the same through or from Grantor will, on demand, execute and deliver to the Grantees any further assurance of the same that may be reasonably required; and that the Grantor will warrant to the Grantees all the said property against every person lawfully claiming the same.

DATED this 5 day of December, 2019.

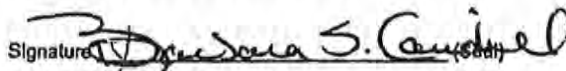

Ingrid P. Williams, Trustee of the 1989 Poole
Family Living Trust-Survivor's Trust

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
County of San Diego : ss.

On this 5th day of December, 2019, before me, Barbara S. Caudill, a Notary Public in and for said State, personally appeared INGRID P. WILLIAMS, Trustee of the 1989 Poole Family Living Trust-Survivor's Trust, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature:  (Seal)

